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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/933,264	08/20/2001	Mahshid Ellie Abdollahi	68775-044	5255

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EXAMINER

JOO, JOSHUA

ART UNIT	PAPER NUMBER
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2154

DATE MAILED: 07/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/933,264	Applicant(s) ABDOLLAHI ET AL.	
	Examiner Joshua Joo	Art Unit 2154	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 April 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Response to Amendment filed 4/10/2006

1. Claims 1-30 are presented for examination.

Continued Examination Under 37 CFR 1.114

2. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 4/10/2006 has been entered.

Claim Rejections - 35 USC § 101

3. Claims 6-8, 22-24 are rejected under 35 U.S.C. 101 because the invention is not limited to tangible embodiments (e.g., signal). As such, the claim is not limited to statutory subject matter and is therefore non-statutory.
4. Applicant argued that "Applicants have carefully reviewed the entire Guidelines [Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility], but have found nothing that states or implies a claim directed to a signal is not statutory."
5. In response, the following sections are directly from the Guidelines:

(a) Functional Descriptive Material: "Data Structures"
Representing Descriptive Material Per Se or Computer Programs
Representing Computer Listings Per Se

Data structures not claimed as embodied in computer-readable media are descriptive material per se and are not statutory because they are not capable of causing functional change in the computer. See, e.g., Warmerdam, 33 F.3d at 1361, 31 USPQ2d at 1760 (claim to a data structure per se held nonstatutory). **Such claimed data structures do not define any structural and functional interrelationships between the data structure and other claimed aspects of the invention which permit the data structure's functionality to be realized.**

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(c) Electro-Magnetic Signals

First, a claimed signal is clearly not a "process" under Sec. 101 because it is not a series of steps. The other three Sec. 101 classes of machine, compositions of matter and manufactures "relate to structural entities and can be grouped as 'product' claims in order to contrast them with process claims."

"The term machine includes every mechanical device or combination of mechanical device or combination of mechanical powers and devices to perform some function and produce a certain effect or result." Corning v. Burden, 56 U.S. (15 How.) 252, 267 (1854). A modern definition of machine would no doubt include electronic devices which perform functions. Indeed, devices such as flip-flops and computers are referred to in computer science as sequential machines. **A claimed signal has no physical structure, does not itself perform any useful, concrete and tangible result and, thus, does not fit within the definition of a machine.**

A "composition of matter" "covers all compositions of two or more substances and includes all composite articles, whether they be results of chemical union, or of mechanical mixture, or whether they be gases, fluids, powders or solids." Shell Development Co. v. Watson, 149 F. Supp. 279, 280, 113 USPQ 265, 266 (D.D.C. 1957), aff'd, 252 F.2d 861, 116 USPQ 428 (D.C. Cir. 1958). **A claimed signal is not matter, but a form of energy, and therefore is not a composition of matter.**

A product is a tangible physical article or object, some form of matter, which a signal is not. That the other two product classes, machine and composition of matter, require physical matter is evidence that a manufacture was also intended to require physical matter. A signal, a form of energy, does not fall within either of the two definitions of manufacture. **Thus, a signal does not fall within one of the four statutory classes of Sec. 101.**

These interim guidelines propose that such signal claims are ineligible for patent protection because they do not fall within any of the four statutory classes of Sec. 101.

Therefore, the 101 rejections of claimed signals stand in this rejection.

Response to Arguments

6. Applicant's arguments with respect to claims 1 and 16 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1, 2, 6-11, 14, 16, 17, 21-26, and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Srivastava, US Patent #6,684,331 (Srivastava hereinafter), in view of Bremer et al, US Patent #6,553,002 (Bremer hereinafter) and Hurst et al, US Patent #6,151,633 (Hurst hereinafter).

9. As per claims 1 and 16, Srivastava teaches substantially the invention as claimed including a method of managing a plurality of to-be managed nodes, Srivastava teachings comprising the steps of:

dividing a plurality of nodes into one or more groups, including a particular group of two or more nodes (Col 16, line 66-Col 17, line 4. Multicast group comprising nodes A-H);

receiving a specification at a source to send a set of one or more messages from the source to the particular group of nodes, the specification designating the particular group and not specifying any particular node of the particular group (Col 16, lines 10-12. Send keys via multicast message.); and

if each node of the particular group has a return path to the source, then, for each given node of the particular group (Col 13, lines 53-56; Col 14, lines 3-7; Col 15, lines 49-54. Nodes communicate public value and keys for creating multicast group.);

transmitting from the source a packet containing a network layer header, including an address corresponding to the given node, but not the other nodes, of the particular group, wherein the address corresponding to the given node, in the packet, is a distinct address that is different from any address corresponding to any other node of the particular group (Col 16, lines 15-16. Send messages to each group member individually), and

wherein an operator can specify a given list of messages for execution by an entire group of the nodes by reference to an indication of the group, instead of separately specifying each individual node of that group at the time of specifying the given list of messages to be executed (Col 16, lines 10-12. Transmit message to nodes A-H via a multicast message.).

10. Srivastava does not teach of a second header specifying a syntax and semantic by which the packet may be parsed, and one or more messages of the set; and waiting to receive at the source a response packet acknowledging proper receipt of the packet from the given node.

11. Bremer teaches of routing packets in a communications network, where the packet contains a header that stores data, information regarding how it will be parsed, and the address of the destination (Col 6, lines 29-51).

12. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Srivastava and Bremer because the teachings of Bremer for the packets to contain header portions that stores information regarding parsing of the packet would improve the teachings of Srivastava by allowing the nodes to process the received message according to the proper protocol (Col 6, lines 31-36).

13. Hurst teaches the concept of waiting to receive at the source acknowledgment of the receipt of the message (Col 4, lines 52-67).

14. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Srivastava, Bremer, and Hurst because the teachings of Hurst to wait for the receive at the source acknowledgment of the receipt of the message would

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improve the reliability in the system of Srivastava and Bremer by ensuring that messages are received before further action is taken.

15. As per claims 2 and 17, Srivastava does not teach the method and apparatus wherein the packet is transmitted to a second one of the given nodes of the particular group at the time of, or after, transmitting the packet to a first one of the given nodes of the particular group but before receipt of the response packet from the first given node of the particular group acknowledging receipt of the packet transmitted thereto.

16. Hurst teaches of transmitting a message to nodes in a group at the same time and receiving responses afterwards (Col 4, lines 52-67).

17. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Srivastava, Bremer, and Hurst because the teachings of Hurst to transmit to nodes in a group at the same time and receive responses afterwards would improve the system of Srivastava, Bremer, and Hurst by providing acknowledgments of the receipt of messages and reducing the number of messages transmitted over the network at a given time.

18. As per claims 6 and 21, Srivastava teaches a signal including said packet formed by the method of claim 1 (Col 16, lines 15-17. Message.).

19. As per claims 7 and 22, Srivastava teaches the storage device for storing said signal of claim 6 (Col 16, lines 10-12. Group controller node, nodes.).

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20. As per claims 8 and 23, Srivastava teaches a receiver for receiving said signal of claim 6 (Col 16, lines 10-12, 15-16. Node.).

21. As per claims 9 and 24, Srivastava teaches the method and apparatus, wherein the source knows, prior to said step (d), each of said addresses corresponding respectively to one of the given nodes of the particular group (Col 16, lines 15-16. Send messages individually to nodes. Col 17, lines 7-10, 27-30. Address identifier for nodes joining multicast group.).

22. As per claims 10 and 25, Srivastava teaches the method and apparatus, further comprising the step (d1) of, prior to said step (d) storing, at the source, each of said addresses corresponding respectively to one of the given nodes of the particular group (Col 16, lines 15-16. Send messages individually to nodes. Col 17, lines 7-10, 27-30. Address identifier for nodes joining multicast group. It is inherent that the center has the addresses stored to be able to individually transmit messages to each node.).

23. As per claims 11 and 26, Srivastava teaches the method of claim 1, further comprising, prior to said step (d), a step (d1) of obtaining, at the source, each of said addresses corresponding respectively to one of the given nodes of the particular group (Col 16, lines 15-16. Send messages individually to nodes. Col 17, lines 7-10, 27-30. Address identifier for nodes joining multicast group. It is inherent that the center has obtained the address to be able to individually transmit messages to each node.).

24. As per claims 14 and 29, Srivastava and Hurst teaches said step (d) enabling the source to control how many of the given nodes of the particular group issue a response packet to the

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source within a given time period (Col 16, lines 10-16. Transmit message to nodes. Hurst: Col 4, lines 52-67. Wait to receive acknowledgements.).

25. Claims 15 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Srivastava, Bremer, and Hurst, in view of Miller et al, US Patent #5,727,002 (Miller hereinafter).

26. As per claims 15 and 30, Srivastava does not teach the method and apparatus, further comprising the step of: (a1) prior to said step (a), obtaining, at the source, a plurality of addresses, each of the plurality of addresses being a unicast address for a respective one of the given nodes of the particular group, wherein said step (a) of dividing, performed subsequent to obtaining the plurality of addresses, is achievable entirely at the source without communication of messages from or to the source and without communication of messages among any of the plurality of to-be-managed nodes.

27. Miller teaches of (a), obtaining, at the source, a plurality of addresses, each of the plurality of addresses being a unicast address for a respective one of the given nodes of the particular group, wherein said step (a) of dividing, performed subsequent to obtaining the plurality of addresses, is achievable entirely at the source without communication of messages from or to the source and without communication of messages among any of the plurality of to-be-managed nodes. (Col 15, line 60 – Col 16, line 15. Maintain list of IP addresses of clients in each group; organizing the list of clients in each group; and identify group by client IP addresses.).

28. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Srivastava, Bremer, Hurst, and Miller because the teachings of Miller of paragraph 27 would improve the system of Srivastava, Bremer, and Hurst by

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allowing individual identification of each client and allowing the source to organize and manipulate the list of clients in each group (Col 15, lines 60-64).

29. Claims 3-5, and 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Srivastava, Bremer, and Hurst, in view of Kekic et al, US Patent #5,999,179 (Kekic hereinafter).

30. As per claims 3 and 18, Srivastava teaches the method and apparatus wherein each given node of the particular group has a return path to the source (Col 13, lines 53-56; Col 14, lines 3-7; Col 15, lines 49-54. Nodes communicate public value and keys for creating multicast group.). However, Srivastava does not teach wherein one of the one or more messages in the packet is a request to retrieve a specific information obtainable from each given node of the particular group, the method further comprising the step of:

f) receiving from each given node of the particular group a current value of the specific information obtainable from the respective given node.

31. Kekic teaches of a client-server network management system, where a managed network element replies to the requested information from the server (Col 15, lines 59-60).

32. It would have obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Srivastava, Bremer, Hurst, and Kekic because the teachings of Kekic to receive specific information from the managed elements would improve the system of Srivastava, Bremer, and Hurst by allowing for configuration changes as a result of receiving the requested information (Col 15, lines 52-56, 60-62)

33. As per claims 4 and 19, Srivastava does not teach the method and apparatus wherein each given node of the group contains at least a portion of a hierarchically organized

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management information base (MIB), the method comprising the step of displaying on a display device the hierarchical organization of the MIB and a list of specific parameters of the MIB to be accessed.

34. Kekic teaches of displaying the hierarchical representation of information (Fig 3B, 305; Col 15, lines 10-16), displaying and setting MIB variables (Col 28, lines 32-39), and nodes containing hierarchical based MIB variables (Col 23, lines 9-20, 54-62; Col 24, lines 34-40.)

35. It would have obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Srivastava, Bremer, Hurst, and Kekic because the teachings of Kekic of paragraph 34 would improve the efficiency of the system of Srivastava, Bremer, and Hurst by providing visual representation of information for determining the state of the managed nodes.

36. As per claims 5 and 20, Srivastava does not teach the method and apparatus wherein each node of the group has a return path to the source of commands and wherein the command is a request to retrieve a specific information corresponding to the list of specific parameters, the method further comprising the steps of: receiving from each given node of the group a current value of the specific information corresponding to the list of specific parameters, and displaying a current value of each specific parameter of the list.

37. Kekic teaches of a managed network element replying to a requested information from the server (Col 15, lines 59-60), and displaying and monitoring the attributes of network elements, where the user can click on one of several attributes of the element to obtain values regarding the element (Col 27, lines 20-31).

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38. It would have obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Srivastava, Bremer, Hurst, and Kekic because the teachings of Kekic of paragraph 37 would improve the system of Srivastava, Bremer, and Hurst by allowing for the remote monitor and management of network elements (Col 15, lines 63-66) and allowing the user to visually determine the attributes and statuses of the network elements.

39. Claims 12-13 and 27-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Srivastava, Bremer, and Hurst, in view of Waclawsky et al, US Patent #6,628,610 (Waclawsky hereinafter).

40. As per claims 12-13 and 27-28, Srivastava does not teach not teach the method, wherein step (d) enables the source to control a rate of transmission of packets to the given node of the particular group or to control a rate of reception of response packets from the given node of the particular group.

41. Waclawsky teaches that the source can control the transmission rate of packets to the receivers (Col 15, lines 50-53).

42. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine teachings of Srivastava, Bremer, Hurst, and Waclawsky because the teachings of Waclawsky to vary the transmission rate of packets would improve the quality of service in the system of Srivastava, Bremer, and Hurst by reducing the congestion of the network and allowing the system to adjust the transmission rate according to the conditions of the network.

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Conclusion

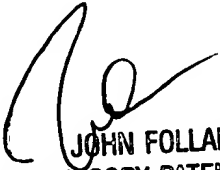
43. A shortened statutory period for reply to this Office action is set to expire THREE MONTHS from the mailing date of this action.

44. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joshua Joo whose telephone number is 571 272-3966. The examiner can normally be reached on Monday to Thursday 8AM to 5PM and every other Friday.

45. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John A. Follansbee can be reached on 571 272-3964. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

46. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

July 3, 2006
JJ


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